University of Oregon – Oregon Institute of Marine Biology / Charleston, OR

Collaborative processes assist with research and recovery for populations of native Olympia oysters

Project Title:

A collaborative approach to address reproduction, larval supplies, and settlement during recovery of native Olympia oysters

Location:

Coos Bay, Oregon

Goal:

Generate new science to support development of a conservation and recovery plan for Olympia oyster populations throughout Coos Bay

Partners:

Oregon Institute of Marine Biology; South Slough National Estuarine Research Reserve; Oregon State University; Oregon Sea Grant; Oregon Department of Fish and Wildlife

Timeline:

Nov 2011 to Sep 2013

The problem / decline and recovery of Olympia oysters:

In the not so distant past, native Olympia oysters (*Ostrea lurida*) were an important and integral member of the ecological communities along the Pacific coast of North America. Populations of the small oysters declined over the last century due to overharvesting, burial by fine sediments, pollution, dredging, alteration of estuarine habitats, and other stressors. Regional demise of the oysters has prompted widespread interest in conservation efforts and restoration activities. A central problem is to design the recovery work in a manner that ensures successful reproduction and fosters the maintenance of self-sustaining populations.

Joint fact-finding / stakeholders and scientists investigate Olympia oyster life histories in Coos Bay:

Stakeholders and marine scientists are working together to follow a joint fact-finding process designed to investigate the reproductive biology and larval ecology of Olympia oysters in Coos Bay, Oregon. Critical issues have been identified concerning the timing of reproduction and brooding, larval supplies and dispersal, and larval settlement. Graduate students at the Oregon Institute of Marine Biology will conduct new thesis research guided by the joint fact-finding process, and the results will contribute to development of a local conservation and recovery strategy.

Olympia oysters (*Ostrea lurida*)

Joint Fact-Finding:

1. **Identify the problem & frame the issues**
2. **Bring together interested stakeholders & technical experts**
3. **Facilitate meetings to explore existing information & recognize data gaps**
4. **Assemble & translate technical findings into accessible formats**
5. **Hold objective deliberations to reach agreement**

University of Oregon – Oregon Institute of Marine Biology / Charleston, OR

"Recovery of Olympia oysters will help restore lost ecological functions in Coos Bay, including provision of complex bottom habitat, biofiltration of the water column, and stabilization of the soft sediments."

Stakeholder Involvement:

Stakeholders participate as members of the Olympia Oyster Recovery Advisory Committee. Input and issues raised by the stakeholder committee are used to help direct and guide the scientific work completed by graduate students and faculty at the Oregon Institute of Marine Biology.

Support:

Financial support for the project is provided by a grant from the NOAA-NERRS Science Collaborative.

Learn More:

Steve Rumrill;* ODFW *Principal Investigator
Steven.S.Rumrill@state.or.us
541-867-0300 ext. 245

John Bragg; South Slough NERR *Outreach Leader*
John.Bragg@state.or.us
541-888-5558 ext. 29

Structured decision-making to develop an effective conservation and recovery strategy for Olympia oysters in Coos Bay:

Following the joint fact-finding effort, stakeholders and scientists will embark upon a Structured Decision-Making (SDM) process to develop a conservation and recovery plan. The SDM process will include clarification of the rationale and context for local decisions, and development of criteria to evaluate the recovery of oyster populations in Coos Bay. Several alternative conservation and recovery scenarios will be explored, and the team will estimate their costs and consequences. These factors will be brought together to select the optimum design for the local oyster conservation and recovery strategy.

Structured Decision-Making:

1. **Clarify the rationale & context for decisions**
2. **Define the objectives & evaluation criteria for oyster recovery**
3. **Develop alternative conservation & recovery scenarios**
4. **Estimate the costs & consequences for conservation options**
5. **Evaluate trade-offs & select the optimum design**

Conservation of Olympia oysters in Coos Bay:

Olympia oysters are making a slow recovery in Coos Bay, and natural recruitment of new juveniles has been evident over the past several years. An effective conservation strategy for this species is likely to include mapping work to document the current status of populations, continued prohibition of commercial and recreational harvests, restoration activities designed to provide suitable habitat for juvenile and adult Olympia oysters, and novel education/outreach efforts.